

What is claimed is:

1. A coating material comprising:

sodium in a range of from 0.1% to 10%;

5 magnesium in a range of from 0.01% to 1%;

aluminum in a range of from 0.1% to 15%;

potassium in a range of from 1% to 30%;

silicon in a range of from 10% to 30%; and

iron in a range of from 0.1% to 1%.

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2. The coating material of claim 1, further comprising:

strontium in a range of from 0.001% to 0.05%; and

zirconium in a range of from 0.001% to 0.05%.

15 3. The coating material of claim 1, further comprising:

phosphorus in a range of from 0.01% to 5.0%;

chlorine in a range of from 0.01% to 1.0%;

calcium in a range of from 0.1% to 10%;

titanium in a range of from 0.1% to 10%;

20 zinc in a range of from 0.1% to 10%; and

molybdenum in a range of from 0.1% to 5%.

4. The coating material of claim 1, further comprising:

phosphorus in a range of from 0.01% to 0.5%;

25 sulfur in a range of from 0.01% to 1.0%; and

titanium in a range of from 0.1% to 10%.

5. The coating material of claim 1, further comprising:
calcium in a range of from 0.01% to 5%;
chlorine in a range of from 0.01% to 1%; and
5 titanium in a range of from 0.01% to 5%.
6. The coating material of claim 1, wherein the sodium is
in a range of from 0.5% to 5%, the magnesium is in a range
of from 0.01% to 0.5%, the aluminum is in a range of from
10 1% to 15%, the potassium is in a range of 1% to 15%,
silicon is in a range of 15% to 30%, and the iron is in
a range of 0.15% to 0.8%, as a result of a fluorescent
X-ray analysis in an incinerated state after drying.
- 15 7. The coating material of claim 1, wherein the sodium
is in a range of from 0.7% to 1.5%, the magnesium is in
a range of from 0.015% to 0.040%, the aluminum is in a
range of from 2.5% to 6.5%, the potassium is in a range
of 1% to 5%, silicon is in a range of 15% to 20%, and
20 the iron is in a range of 0.05% to 0.30%, as a result
of a fluorescent X-ray analysis in an incinerated state
after drying.
8. The coating material of claim 1, wherein the sodium is
25 in a range of from 1.0% to 3.0%, the magnesium is in a
range of from 0.05% to 0.2%, the aluminum is in a range

of from 0.8% to 4.0%, the potassium is in a range of 8.0% to 15%, silicon is in a range of 25% to 30%, and the iron is in a range of 0.3% to 0.9%, as a result of a fluorescent X-ray analysis in an incinerated state after drying.

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9. The coating material of claim 1, wherein the sodium is in a range of from 1.0% to 3.0%, the magnesium is in a range of from 0.02% to 0.07%, the aluminum is in a range of from 1.0% to 6.0%, the potassium is in a range of 5.0% to 10%, silicon is in a range of 20% to 25%, and the iron is in a range of 0.7% to 1.0%, as a result of a fluorescent X-ray analysis in an incinerated state after drying.

10. The coating material of claim 1 comprising:
15 sodium in a range of from 4% to 8% in relation to silicon;

magnesium in a range of from 0.1% to 0.5% in relation to silicon;

chlorine in a range of from 0.3% to 0.6% in relation to silicon; and
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potassium in a range of from 0.1% to 0.5% in relation to silicon.

11. The coating material of claim 1 comprising:
25 sodium in a range of from 4.5% to 6% in relation to silicon;

magnesium in a range of from 0.1% to 0.3% in relation to silicon;

chlorine in a range of from 0.4% to 0.6% in relation to silicon; and

5 potassium in a range of from 0.1% to 0.3% in relation to silicon.

12. A method of manufacturing a coating material comprising:

10 agitating a mixture of a nonmetal coating material and aluminum oxide powder in a mixing tank;

adding and agitating an adhesive including water, caustic soda, high-protein powder, polyvinyl acetate, and glycerin in the mixing tank;

15 adding and agitating ceramic powder in the mixing tank; and

grinding the mixture powder.

13. The method of claim 12, wherein the mixture powder is
20 ground into particles having grain size in a range of from 0.15 to 200 μ m.

14. The method of claim 12, wherein the nonmetal coating material is made of a thickening agent including a binder
25 and the adhesive, titanium oxide, kaolin, and a plastic raw material.

15. The method of claim 14, wherein the binder is made of sodium silicate, potassium silicate, silicon dioxide, amorphous silica, bentonite, and the plastic raw material.

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